

1 What is claimed is:

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3 1. A dishwasher comprising:

4 a housing;

5 a tub in the housing to hold tableware;

6 an injector assembly for injecting water on the tableware in the tub; and

7 an inlet valve assembly comprising:

8 a case installed at an inlet passage for supplying the water to the tub,

9 the case having an inlet opening via which the water flows in and an outlet

10 opening via which the water is discharged;

11 a first valve provided to the case to selectively open/close a passage

12 in the case; and

13 a second valve closing the passage in the case in case that the water

14 leaks.

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16 2. The dishwasher as claimed in claim 1, wherein the case is installed at a lower

17 part of a rear panel of the housing.

18
19 3. The dishwasher as claimed in claim 1, wherein the first valve selectively

20 opens/closes the inlet opening.

21
22 4. The dishwasher as claimed in claim 1, wherein the second valve closes the

23 outlet opening.

25 5. The dishwasher as claimed in claim 1, wherein the second valve closes the
26 passage by the water leaking on a base panel of the housing.

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28 6. The dishwasher as claimed in claim 1, the second valve comprising:
29 a diaphragm installed at the passage; and
30 a pressing mechanism floated by the leaking water to press the diaphragm to close the
31 passage.

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33 7. The dishwasher as claimed in claim 6, the pressing mechanism comprising:
34 a float configured to floated by the leaking water; and
35 a plunger separated from the float to press the diaphragm if the float is floated.

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37 8. The dishwasher as claimed in claim 7, wherein the plunger is attached to or
38 detached from the float according to a distance from the float.

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40 9. The dishwasher as claimed in claim 7, the pressing mechanism further
41 comprising a magnet detaching the plunger from the magnet according to a distance from the
42 plunger in the case.

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44 10. The dishwasher as claimed in claim 7, wherein the float is guided by a guide
45 provided on a base panel of the housing.

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47 11. The dishwasher as claimed in claim 7, wherein the case comprises a holder
48 guiding a movement of the float.

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50 12. The dishwasher as claimed in claim 7 or claim 9, the float comprising:
51 a body floated by the leaking water; and
52 an extension member extending from the body to be adjacent to the plunger in the
53 case.

54
55 13. The dishwasher as claimed in claim 12, wherein the body is formed of
56 Styrofoam.

57
58 14. The dishwasher as claimed in claim 12, wherein the extension member
59 comprises a rod installed at the body and an arm extending from the rod to be adjacent to the
60 plunger.

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62 15. The dishwasher as claimed in claim 14, wherein the arm is movably installed
63 at the rod.

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65 16. The dishwasher as claimed in claim 12, wherein the magnet is installed at the
66 extension member in the vicinity of the plunger.

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68 17. The dishwasher as claimed in claim 14, wherein the magnet is installed at the
69 arm.

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71 18. The dishwasher as claimed in claim 14, wherein the rod comprises a step
72 supporting the arm.

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74 19. The dishwasher as claimed in claim 14, wherein the rod comprises a plurality
75 of steps to install the arm at a predetermined portion of the rod selectively.

76
77 20. An inlet valve assembly comprising:
78 a case installed at an inlet passage for supplying water, the case having an inlet
79 opening via which the water flows in and an outlet opening via which the water is discharged;
80 a first valve provided to the case to selectively open/close a passage in the case; and
81 a second valve closing the passage in the case in case that the water leaks.

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83 21. The inlet valve assembly as claimed in claim 20, wherein the case is installed
84 at a lower part of a rear panel of a housing of a home appliance.

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86 22. The inlet valve assembly as claimed in claim 20, wherein the first valve
87 selectively opens/closes the inlet opening.

88
89 23. The inlet valve assembly as claimed in claim 20, wherein the second valve
90 closes the outlet opening.

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92 24. The inlet valve assembly as claimed in claim 20, wherein the second valve
93 closes the passage by the water leaking on a base panel of a housing of a home appliance.

94
95 25. The inlet valve assembly as claimed in claim 20, the second valve
96 comprising:

97 a diaphragm installed at the passage; and
98 a pressing mechanism floated by the leaking water to press the diaphragm to close the
99 passage.

100
101 26. The inlet valve assembly as claimed in claim 25, the pressing mechanism
102 comprising:

103 a float configured to floated by the leaking water; and
104 a plunger separated from the float to press the diaphragm if the float is floated.

105
106 27. The inlet valve assembly as claimed in claim 26, wherein the plunger is
107 attached to or detached from the float according to a distance from the float.

108
109 28. The inlet valve assembly as claimed in claim 26, the pressing mechanism
110 further comprising a magnet detaching the plunger from the magnet according to a distance
111 from the plunger in the case.

112
113 29. The inlet valve assembly as claimed in claim 26, wherein the float is guided
114 by a guide provided on a base panel of a housing of a home appliance.

115
116 30. The inlet valve assembly as claimed in claim 26, wherein the case comprises
117 a holder guiding a movement of the float.

118
119 31. The inlet valve assembly as claimed in claim 26 or claim 28, the float
120 comprising:

121 a body floated by the leaking water; and
122 an extension member extending from the body to be adjacent to the plunger in the
123 case.
124

125 32. The inlet valve assembly as claimed in claim 31, wherein the body is formed
126 of Styrofoam.
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128 33. The inlet valve assembly as claimed in claim 31, wherein the extension
129 member comprises a rod installed at the body and an arm extending from the rod to be
130 adjacent to the plunger.
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132 34. The inlet valve assembly as claimed in claim 33, wherein the arm is movably
133 installed at the rod.
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135 35. The inlet valve assembly as claimed in claim 31, wherein the magnet is
136 installed at the extension member in the vicinity of the plunger.
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138 36. The inlet valve assembly as claimed in claim 33, wherein the magnet is
139 installed at the arm.
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141 37. The inlet valve assembly as claimed in claim 33, wherein the rod comprises a
142 step supporting the arm.
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144 38. The inlet valve assembly as claimed in claim 33, wherein the rod comprises a

145 plurality of steps to install the arm at a predetermined portion of the rod selectively.